



**Presentation Prepared for NH House Science
Technology Committee in Support of HB522**
**An Industry Perspective
on 5G Wireless Technologies**

**Environmental Health Trust
Canadians for Safe Technology**

**Frank Clegg
Feb. 12, 2019**



Bio and Organization's Focus

- 40+ years in the technology industry
- Most recent position, President of Microsoft Canada

C4ST: Canadians for Safe Technology (CEO and Chairman)

- Not-for-profit, completely volunteer-based, national coalition of parents, citizens and experts
- To educate and inform Canadians about the dangers of the exposures to unsafe levels of radiation from wireless technology
- To work with all levels of government to create healthier communities for children and families from coast to coast to coast.

Environmental Health Trust (Co-Chairman Business Advisory Group)

The only nonprofit in the world today that both:

- Carries out high-level critical research on controllable environmental health hazards
- Works directly with local communities, teachers, parents and students as well as policy makers to understand and mitigate these hazards through research, education and advocacy.



Abysmal track record of protecting citizens

- Asbestos
 - Cigarette smoking
 - Bisphenol-A (BPA)
 - Thalidomide
 - Urea formaldehyde insulation
-
- Concrete action was not taken until decades after the original science showing harm was published
 - Cisco projects 500 billion wireless connected objects by 2030
 - On average 59 per individual¹ on earth (will be higher in developed countries)

My Industry has lost the public's trust

- Lloyd's of London and Swiss Re have identified EMR as emerging risks
- 10K reports identify business risks with EMR (Verizon and British Telecom)
- Facebook's breach that impacted 80+ million consumers
- Similar to Yahoo's 2014 security breach impacting 500 million customers that wasn't reported until 2016
- The \$35million fine may not impact the behaviour of companies with billions of dollars on their balance sheet.
- France's "Phonagate" that showed 90+% of phones exceed safety regulations

Challenging the business case of wireless solutions

Schoechle, Timothy, Re-Inventing Wires: The Future of Landlines and Networks, National Institute for Science, Law & Public Policy Washington, DC. (2018)

Wireless networks:

- Continue to be about 100 times slower than wired systems
- Are unreliable, more vulnerable to security and privacy problems and prone to both latency and delay issues
- Consume significant amounts of energy and are not sustainable
- Can leave people vulnerable in the event of a power grid failure
- Increase the points of vulnerability hundreds of thousands of times
- Significantly increase the amount of personal and business data at risk

My Industry's strategy

- If asked if the technology is safe, states “We meet Federal Guidelines (if used correctly)”
- Bury warnings inside devices or their manuals so they are legally protected
- Resist any actions that will slow the deployment/acceptance of new technology
- Pre-emptively introduce legislation that will streamline the installation of new technology (5G)
- Constipate the regulation process with industry funded studies that are inconclusive or fail to show harm
- Continue to take advantage of the current process of introducing new technology and letting others monitor for damage

Government needs to take a proactive approach

- The penetration of wireless devices is unprecedented in history and will escalate
- Government regulation must break the current paradigm of introducing new technology and then monitoring for damage
- Pass HB522 to understand the consequences of an unmonitored 5G deployment
 - Investigate, monitor and regulate the cumulative effects of 59 devices per person
 - Challenge/Encourage industry to explore and develop safer alternatives
 - Test the technology before it is released to the market
 - Employ and develop alternatives and maintain spaces for individuals who are Electrosensitive

(Appendix):Manufacturers should

For devices

- Post visible warnings of potential harm on all devices
 - Orange, prominent in Europe and Africa, offers advice on the safe use of cell phones.
- Make available in the North American market “on demand” technology for baby monitors, portable phones, etc. (models that are already in use in Europe)
- Improve use of devices for their safe use
 - Off-line mode in schools (hardware and software)
 - Ear bud ease of use
 - Default settings to “off” for sharing or “low” for radiation power levels
 - Turn cell phone off or send warning if placed near the body

For installations

- Start with a wired approach to solutions vs. wireless
- Develop a mindset with developers, designers, installers to meet consumer demand with minimal radiation exposure
 - Smart meters on a point-to-point system vs. a wireless grid
 - Refrain from placing cell towers and antennae close to sensitive areas